



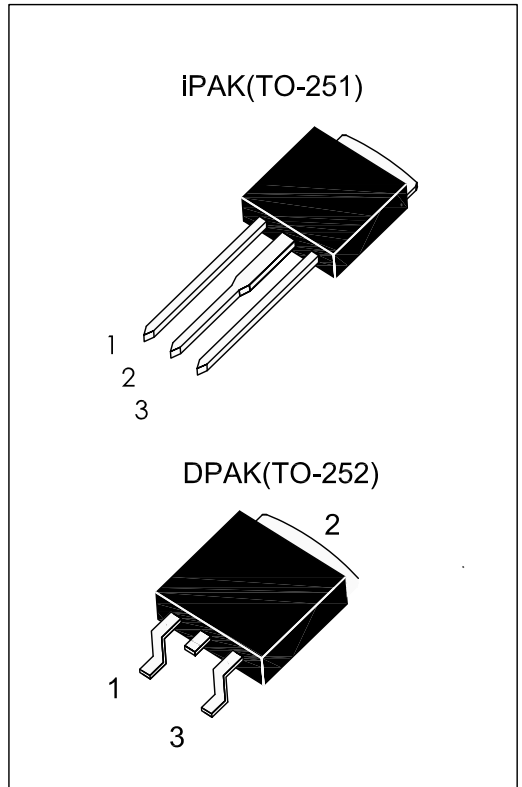
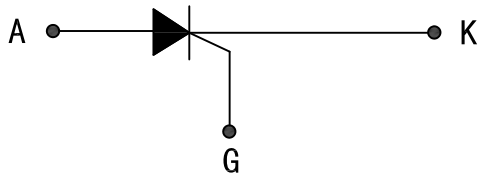
JX04 Series 4A SENSITIVE SCRs

DESCRIPTION:

Highly sensitive triggering levels, the JX04 Series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	4	A
V_{DRM}/V_{RRM}	600	V
I_{GT}	≤ 200	μA



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	- 40 to +150	$^{\circ}C$
Operating junction temperature range	T_j	- 40 to +110	$^{\circ}C$
Repetitive Peak Off-state Voltage	$T_j=25^{\circ}C$ V_{DRM}	600	V
Repetitive Peak Reverse Voltage	$T_j=25^{\circ}C$ V_{RRM}	600	V
RMS on-state current (180 conduction angle)	$T_c=35^{\circ}C$ $I_{T(RMS)}$	4	A
Average on-state current (180 conduction angle)	$T_c=35^{\circ}C$ $I_{T(AV)}$	2.5	A
Non repetitive surge peak on-state current ($T_j=25^{\circ}C$)	$t_p=10ms$ I_{TSM}	30	A
	$t_p=8.3ms$	33	A
I^2t Value for fusing	$t_p=10ms$ I^2t	4.5	A^2s
Peak gate current	$t_p=20\mu s, T_j=110^{\circ}C$ I_{GM}	1.2	A
Average gate power dissipation	$T_j=110^{\circ}C$ $P_{G(AV)}$	0.2	W

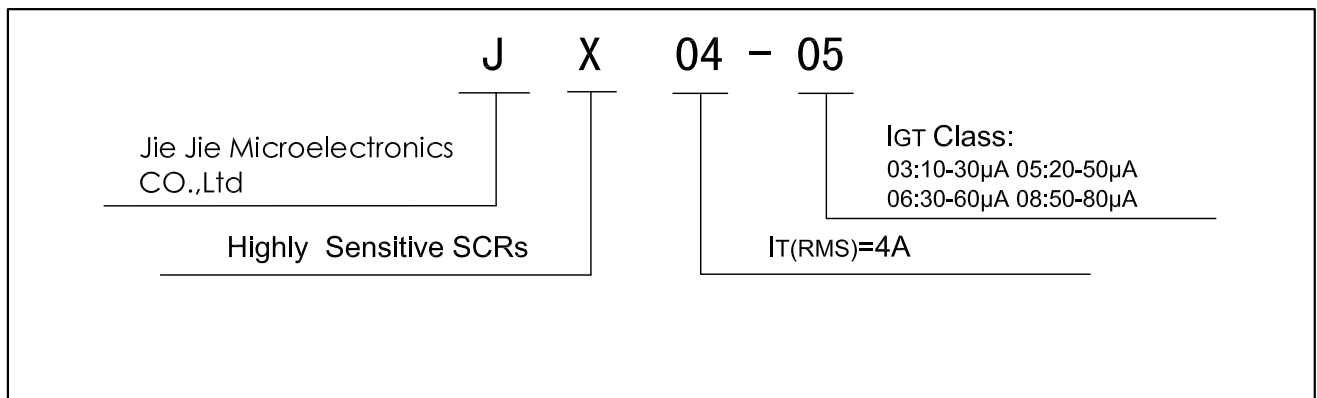
ELECTRICAL CHARACTERISTICS(Tj=25 °C unless otherwise specified)

Symbol	Test Condition		JX04XX			Unit	
			Min.	Typ.	Max.		
IGT	VD=6V RL=100Ω		-	40	200	μA	
VGT			-	0.6	0.8	V	
VGD	VD=VDRM RL=3.3KΩ RGK=1KΩ Tj =110°C		0.2	-	-	V	
IL	IG=1mA RGK=1KΩ		-	-	6	mA	
IH	IT =50mA RGK=1KΩ		-	-	5	mA	
VTM	IT = 8A tp=380uS	Tj=25 °C	-	1.4	1.8	V	
dV/dt	VD=67%VDRM RGK=1KΩ	Tj=110 °C	10	-	-	V/μs	
IDRM	VD= VDRM RGK=1KΩ		Tj=25 °C	-	-	5	μA
			Tj=110 °C	-	-	0.1	mA
IRRM	VR = VRRM RGK=1KΩ		Tj=25 °C	-	-	5	μA
			Tj=110 °C	-	-	0.1	mA

THERMAL RESISTANCES

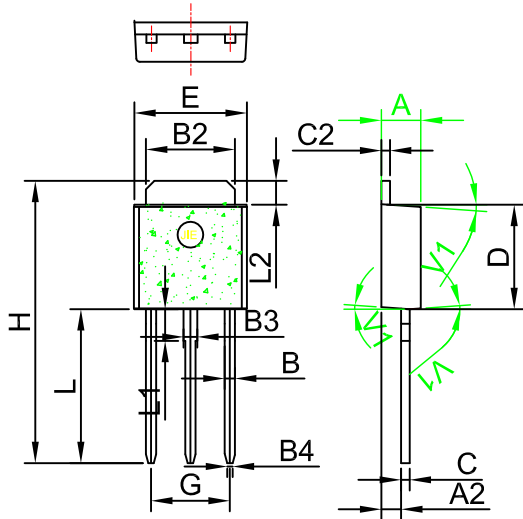
Symbol	Parameter		Value	Unit
Rth(J-C)	Junction to Case	IPAK DPAK	2.8	°C/W

ORDERING INFORMATION



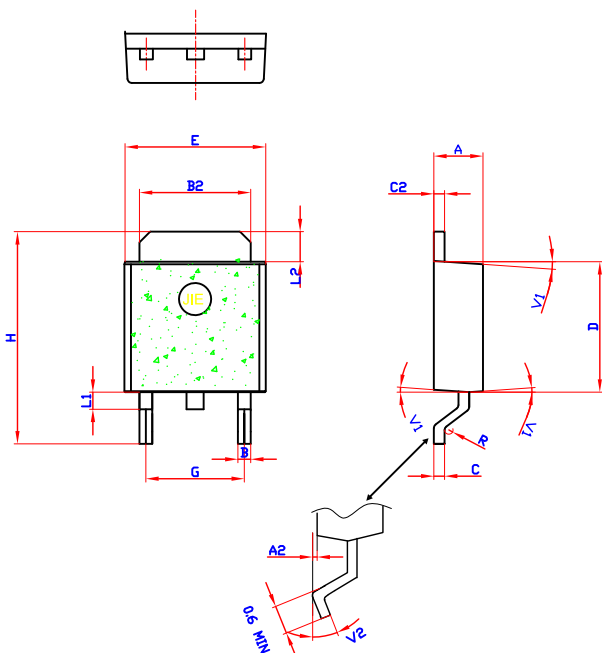
PACKAGE MECHANICAL DATA

iPAK



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.2		2.4	0.086		0.095
A2	0.9		1.1	0.035		0.043
B	0.55		0.65	0.021		0.026
B2	5.2		5.4	0.204		0.212
B3	0.76		0.85	0.030		0.033
B4		0.32			0.013	
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.6	0.252		0.260
G	4.4		4.6	0.173		0.181
H	15.9		16.3	0.626		0.641
L	9		9.4	0.354		0.370
L1	1.8		1.9	0.071		0.075
L2	1.37		1.5	0.054		0.059
V1		4°			4°	

DPAK



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.2		2.4	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.021		0.026
B2	5.2		5.4	0.204		0.212
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.6	0.251		0.259
G	4.40		4.60	0.173		0.181
H	9.35		10.1	0.368		0.397
L1		0.8			0.031	
L2	1.37		1.5	0.054		0.059
V1		4°			4°	
V2	0°		8°	0°		8°

FIG.1: Maximum power dissipation versus RMS on-state current(full cycle)

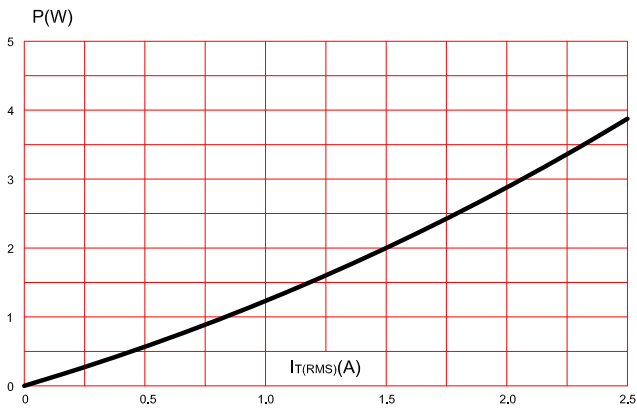


FIG.2: Average on-state current versus case temperature(full cycle)

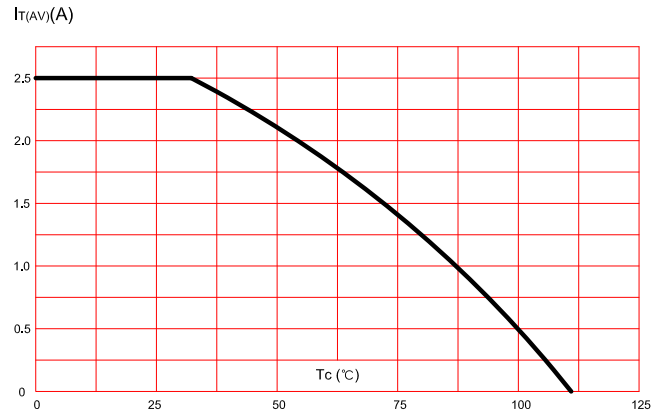


FIG.3: On-state characteristics (maximum values)

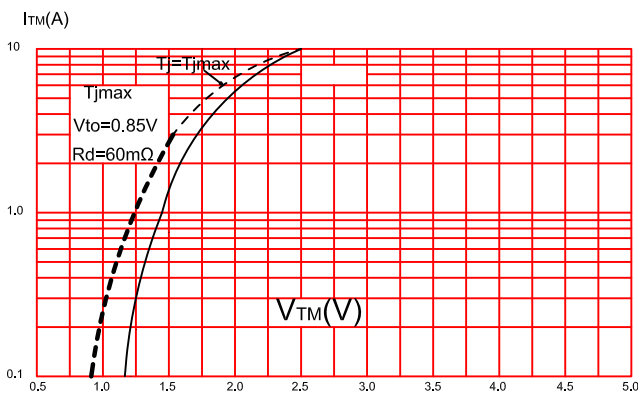


FIG.4: Surge peak on-state current versus number of cycles.

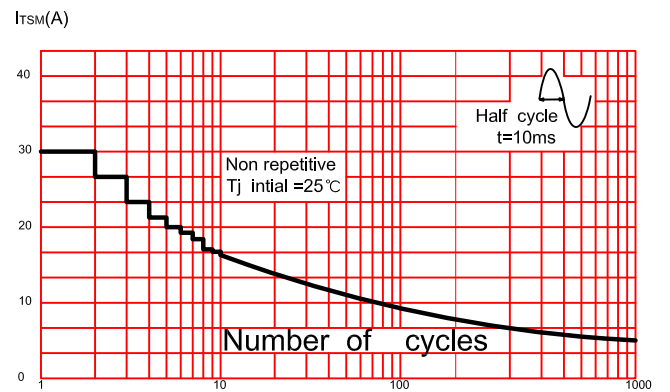


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$.

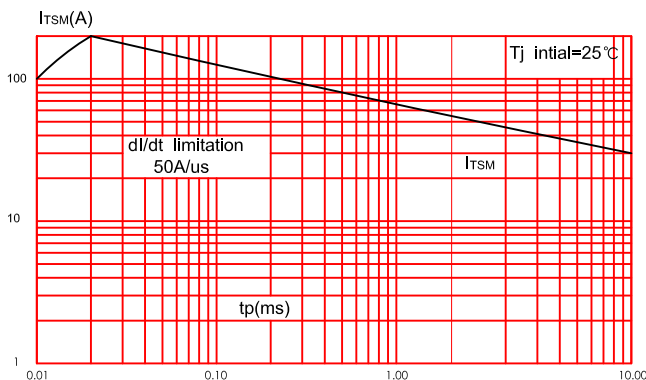


FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature(typical values).

